

Length of forewing: 15.5-17.25 mm. (17.25 mm., in holotype).

♂ Holotype, WESTERN CAPE PROVINCE: Summit of Nieuwveld Mtns. (6,000'), nr. Beaufort West, 16.xii.1958 (C. W. Wykeham); British Museum Reg. No. Rh. H.T. 17143.

♀ Allotype, data as holotype; British Museum Reg. No. Rh. H.T. 17144.

Paratypes in the author's collection, W. CAPE PROVINCE: Head of Verlaten Kloof (5,020'), S. of Sutherland, 20.xii.1957, 1 ♂ (C.G.C.D.); as holotype, 1 ♀ (C.W.W.).

Paratypes in Coll. C. W. Wykeham, as holotype, 3 ♂♂, 6 ♀♀; Head of Verlaten Kloof, 20.xii.1957, 1 ♀ (C.W.W.).

This butterfly was encountered in numbers on an open, stony slope just short of one of the summits of the Nieuwveld Mountains, when the locality was being searched, in company with my nephew, on a warm mid-summer's day in 1958. When disturbed specimens rose from the ground and flew fast and irregularly for short distances before settling, abruptly, usually close to where they were first seen. With their wings closed in characteristic manner, they were inconspicuous against the background of soil and small stones. The pair from Verlaten Kloof were met with a year earlier in country of similar type. These two specimens, from 110 miles W. of the 1958 locality, clearly belong to the same race as the main series, and there is a continuous stretch of high ground between the respective localities.

"Blencathra," Cambridge Avenue, St. Michael's Estate, Cape Town.

## *Berberia abdelkader* Pierret and other Butterflies in Morocco, May 1969

By C. G. M. DE WORMS, M.A., Ph.D., F.R.E.S.

I spent the last few days of my first trip to Morocco, in early May 1965, in the Ifran-Azrou region of the Middle Atlas, in company with Gen. Sir George and Lady Ida Johnson (*Ent. Rec.*, **77**: 177). This area seemed so attractive and so rich in lepidoptera, that I decided to return possibly later in the season, to obtain some of the species which appeared after those already observed there. The opportunity presented itself this spring (1969) for a return visit to this delightful country.

Accordingly I set out on the afternoon of May 15th from London Airport, reaching Gibraltar that evening. Here, I spent the night at the very well-known and comfortable Rock Hotel, and was greeted the following morning by a cloudless sky and glorious day. After arranging to hire a Ford Escort, I had a walk in the Almeda Gardens, in the hope of seeing the Gibraltar Burnet (*Zygaena gibraltica*) but none were forthcoming. However, the road behind the Rock Hotel provided a number of butterflies, including *Gonepteryx cleopatra* L., *Euchloë ausonia* Hübn., *Pararge aegeria* L., *Colias croceus* Fourc. and *Lampides baeticus* L. That evening, I crossed in the ferry to Tangier where I joined Mr and Mrs H. G. Allcard at the very sumptuous El Minzah Hotel. They had just returned from Meknes, and had done two excursions from there to Ifran where, I learnt, the season was a very late one as in most parts of Europe, and that the early spring species were

still on the wing. They flew back to England on the morning of May 17th, when I set out by car heading south along the Atlantic coast. I halted for a short time near Larache, where I found *Euchloë belemia* Esp. flying with *Pyronia bathseba* F. (*pasiphaë* Esp.). Near El Kassim, I took *Maniola jurtina hispulla* Esp. by the side of the main road with *Heodes phlaeas* L. Carrying on through the city of Meknes, I gradually ascended to the plateau of the Middle Atlas. From El Hajeb, I continued through the remarkable Forêt de Jaba which has some similarities in appearance to parts of our New Forest, and then ascended steeply up a winding valley to Ifran at 5,500 feet, where I was pleased to see that the ground we had collected to such good advantage in 1965, has not been impaired. I then descended the ten miles to Azrou, completing the 240 miles from Tangier, making my headquarters for the next fortnight at the Hotel du Panorama, which had also been my haven for a few days in 1965. By the time I arrived, the sun had taken on a very watery appearance and the fine spell which had just preceded me, came to an abrupt end on the following morning of the 18th. The clouds descended low on the mountains, bringing a heavy deluge which lasted all day so that no collecting was possible, a great initial disappointment. The 19th opened with grey skies and a persistent drizzle, but improved as the day went on. In the afternoon I set out on the road south, towards Midelt. After passing through Timhadite, the route over the high plateau ascends steadily to the Col du Zad at 7,300 feet, just 45 miles from Azrou. The summit provided a grand panorama of the surrounding country, with fine winding valleys on the southern side flanked by some huge cedars. But the sun did not oblige and no lepidoptera were seen. On the way back, I surveyed the very attractive nearby lake of Aguelmane.

However, on May 20th, the elements relented and a fine morning greeted me when I revisited Ifran and halted in the small hollow just outside the town on the Boulmane road which had proved so productive in 1965. It was not any less so on this occasion, and I was soon able to appreciate how late the season was, as many of the species we had seen four years earlier, were still on the wing. Among these, that grand fritillary *Euphydryas desfontanii* Godart was flying in quantity with the large females sailing lazily over the herbage, but when I came to scrutinise them closely, I was surprised to find that some *E. aurinia* Rott. were flying in their company, though only apparently just starting to emerge. As I was having lunch, a small Blue fluttered in front of me and I was pleased to see that it was *Philotes bavius* Eversman, very attractive with its row of orange lunules on the upperside of the hindwings. Later that day, I moved to some of the grassy slopes just outside the main cedar forest. This area was alive with lepidopterous life which did not seem to have suffered from the two days deluge. Among the Pierids was that grand species *Zegris eupheme* Esp. careering round its foodplant *Sinapis incana*. *Colias croceus* was very numerous with a high proportion of *f. helice*. Both *Pararge megera* L. and *P. maera* L. were flying together with the latter, a small race, not easily distinguishable from its near relative. In the late afternoon, the long grass seemed to be the chief habitat of *Melitaea aetherie* Hübn. which was settling in dozens on the many flowers. The brilliant red coloration of the males was in striking contrast to the much more

sombre hue of closely related species *M. phoebe* Schiff., which was comparatively scarce. The female *M. aetherie* were also about in numbers and very variable. Among the Blues the very handsome *Lysandra punctifera* Oberthür. looking like an outsize *L. bellargus* Rott. were just starting to appear, while *Lysandra thersites* Chapn. seemed much commoner than *Polyommatus icarus* Rott. The smaller Lycaenids were represented by *Aricia cramera* Esch. with larger orange spots than our Brown Argus. The smallest Blue was the ever present *Cupido lorquini* H.-S. which replaces *C. mimimus* Fuessl. in this region. In the late afternoon I found quite a number of both sexes of *P. bavius* at rest on grass heads, mostly in very good order.

A very warm day with cloudless sky broke on the 21st when I was once again at Ifran at an early hour. Many more insects seemed to be on the wing, including both late *Zerynthia rumina* L. and *Anthocharis eupheno* Esp. Both Brimstones, *Gonepteryx rhamni* L. and *G. cleopatra* L. were to be seen round the bushes of *chênes verts*. *Callophrys rubi* L. was still in fairly fresh condition. Many *Macroglossa stellatarum* were on the move with the day-flying noctuid *Heliothis dipsacea* L. I returned to Azrou over the Tizi-n-Tretten Pass at 6,000 feet, where I saw *Melitae cinxia* L. and *Issoria lathonia* L. Another dull and wet day supervened on May 22nd with very little collecting but the last two days of the week, the 23rd and 24th were much better when I replenished my various series in the Ifran region. *L. punctifera* was now getting much more numerous in both sexes, flying near its apparent foodplant which looked like our *Hippocrepis comosa*. Two species of small Foresters were now flying in fair plenty.

Gen. Sir Gerald Lathbury joined me at Azrou on the evening of May 24th and the following morning in ideal weather, we set out for Ifran, first visiting the hollow near the Hotel Ballima. It was alive with butterflies with *E. desfontainii* predominating. Suddenly Sir Gerald spotted a small Pierid which I took and at once recognised it as *Euchloë tagis* Hübn. of which authentic examples have very seldom been obtained in Morocco, though it has been seen more frequently in Algeria. All the usual species were on the wing in quantity, in particular *L. punctifera* and *M. aetherie*. We also saw the first Swallow-tail, *Iphiclides feithsamele* Dup. Whit Monday, the 26th, also proved another superb day, again spent in the Ifran region with an *al fresco* lunch taken under the famous cedars. *Z. eupheme* was much in evidence with a few *P. bavius*. We also saw the first Marbled Whites which are generally recognised as *f. lucasi* of *Agapetes galatea* L. We revisited this area on the morning of the 27th, another very warm day when on the edge of the forest I saw one of the large Fritillaries dash past me, most probably *Argynnis auresiana* which some authors consider to be the large North African race of *Argynnis adippe* Rott. That afternoon, we motored down the steep and winding valley from Ifran to the Forêt de Jaba which was somewhat disappointing, as we had hoped to see the big Argynnids there, but none were forthcoming. *Aporia crataegi* L. was well out there with a few *M. phoebe* and *M. aetherie*. We also took a single specimen of *Melitaea didyma* Esp.

After a further morning's collecting near Ifran on May 28th, Sir Gerald went off on a bird observation expedition, while I set out on a voyage of discovery to the Imouzzer region, en route to Fez. Madam



Duffal, who ran the Panorama Hotel, had put me in touch with M. Jean Gallet who lived quite close by in Azrou. When I went to see him, I realised he was a leading authority on Moroccan lepidoptera and knew the best locations of all the butterflies and a great many moths. When I enquired the whereabouts of that grand Satyrid *Berberia abdelkader* Pierret, he advised me to try the Imouzzar chain of lakes and marked my map for some of the most likely spots. On the afternoon in question, I followed the route he recommended, eventually ascending a steep, very rough road to an escarpment covered with the small *chênes verts* bushes, interspersed with tufts of long grass on very rocky and stony ground which I surveyed thoroughly, seeing only the occasional *Lysandra punctifera* and *Philotes abencerragus* Pierret. A strong wind was blowing in this bleak and high spot and I was about to return to my car, when suddenly a huge black butterfly sailed past me and settled a little way off. I realised at once it was the much coveted quarry. But, in spite of close stalking, it eluded me. I saw two others soon afterwards, equally elusive and then the sky clouded over. When I told Sir Gerald of my discovery, we decided to revisit the area early on the 29th. We were on the ground by 10 a.m. and as soon as we alighted from the cars, we espied three of the most handsome insects flitting among the long grass which is their foodplant. We spent the day in this remote and somewhat inhospitable region, seeing many *B. abdelkader* mostly in the glades between the thick undergrowth. By stealthy stalking, we managed to secure four specimens in prime condition. Another most interesting small butterfly inhabiting this rather inhospitable region was *Coenonympha vaucheri* Blachier which flitted about the stony knolls and was very hard to see or indeed, to catch. After a further scanning of the Ifran area on the morning of the 30th, Sir Gerald left for Tangier and I paid a further visit to the *abdelkader* locality, seeing several more of this grand insect. Among new discoveries there was *Cigaritis zohra* Donz. a small Copper-like species which hugged the ground and was very difficult to follow. I also took single specimens of *Philotes abencerragus* Pierret on the sage.

The very fine morning of May 31st, M. Gallet called for me early with his son and we picked up a friend, also a collector, in Ifran and proceeded to the rocky region once more, but to a spot some little way from mine, where we saw a fair number of *C. vaucheri*, but very few *B. abdelkader*. So we all repaired about 11 a.m. to my original locality, where we found the big black butterfly flying in even larger numbers than before. We were able to net some very fresh specimens including several females. A great delight for M. Gallet was the capture of a *Euchloë tagis* which he had never come by before and of which his colleague had only taken three in thirty years. The first *Hipparchia aristaeus* Bonelli (*algorica* Oberthür) was taken as well as fresh *Pyronia bathseba* F. (*pasiphaë* Esp.) at this altitude. Several Burnets were now starting to appear and the most notable in this area was *Zygaena orana*.

The very hot morning of June 1st I made a final survey of the ground at Ifran which was as usual alive with butterflies, but a very thorough search failed to reveal any further *Agapetes pherusa* Bdv. of which I had taken a single specimen flying among a host of *A. galatea*. I went on to the Forêt de Jaba for a picnic lunch during which one of the

larger Fritillaries flew over my head. All the smaller species seemed to be there including *M. aetherie*, but worn at these lower levels. I then motored on the further 200 miles to Tangier in great heat, staying at the very comfortable Villa de France Hotel. The following morning, I crossed by the early ferry back to Gibraltar, where I spent the afternoon in the Almeda Gardens which I was pleased to find alive with the local Burnet, *Zygaena gibraltica* flying mainly round the bushes of *Coronilla*, its chief foodplant. I took the evening plane which landed me in London at a fairly late hour, thus ending what had been a most enjoyable, and on the whole, very successful visit to the Middle Atlas.

I have thought it of interest to append a full list of butterflies seen though a good many of the species are similar to those which were enumerated for my 1965 visit.

*Iphiclides feisthameli* Dup. Only one seen at Ifran.

*Zerynthia rumina* L. Still fairly fresh and numerous round Ifran and Azro.

*Anthocharis eupheno* Esp. A few fresh specimens were flying mainly in the cedar forest at Ifran.

*Euchloë tagis* Hübn. A single fresh male taken at Ifran on May 25th and another worn specimen at Imouzzar on the 31st. This small form seems to extremely rare in the Middle Atlas region.

*Euchloë ausonia* Hübn. Generally common in woods and fields.

*Zegris eupheme* Esp. Very numerous and mainly fresh around Ifran. A very large race.

*Pieris brassicae* L. Fairly numerous in the vicinity of Ifran and Azrou.

*Pieris rapae* L. Plentiful in most areas.

*Aporia crataegi* L. First seen in the Forêt de Jaba on May 27th, then increasingly common in most regions.

*Colias croceus* Fourc. Very numerous in most parts with a large proportion of *f. helice*.

*Gonepteryx rhamni* L. Fairly common round Ifran.

*Gonepteryx cleopatra* L. Commoner than the last species in the Ifran area.

*Euphydryas aurinia* Rott. Emerging with the next species, though slightly later and in a very large and bright form.

*Euphydryas desfontainii* Godart Abundant round Ifran and Azrou, though getting worn by end of May. Large and small forms flying together.

*Melitaea didyma* Esp. One fresh example taken in the Forêt de Jaba on May 27th.

*Melitaea cinxia* L. A few fresh specimens seen mainly at high elevations.

*Melitaea phoebe* Schiff. Fairly common, but not so widespread as the next species with which it was flying.

*Melitaea aetherie* Hübn. Very plentiful, mainly among long grass near Ifran. Both dark and light forms of female seen. Also in Forêt de Jaba.

*Issoria lathonia* L. Sporadic round Ifran and Azrou.

*Argynnis auresiana* Fruhst. A few seen near Ifran and in Forêt de Jaba.

*Argynnis pandora* Schiff. One seen in garden at Azrou by M. Gallet.

*Pyrameis atalanta* L. Two seen near Ifran on May 25th.

*Aglais urticae* L. Seen near Meknes on May 17th.

*Agapetes galatea* L. Becoming increasingly common round Ifran from May 26th.

*Agopetas pherusa* Bdv. One taken flying among the preceding species near Ifran on May 30th.

*Pararge aegeria* L. A very orange form numerous round Ifran.

*Pararge megera* L. A very bright form fairly common in the cedar forest.

*Hipparchia aristaeus* Bonelli (*algorica* Oberthür) One taken near Imouzzet on May 31st.

*Berberia abdelkader* Pierret Fairly common along *chênes verts* scrub in the Imouzzet region. first seen on May 28th.

*Maniola jurtina* L. The large *hispulla* form taken near Meknes and a few at Ifran.

*Pyronia bathseba* F. (*pasiphaë* Esp.) Taken worn near Larache and fresh at Imouzzet on May 30th.

*Coenonympha pamphilus* L. The *lyllus* form numerous round Ifran.

*Coenonympha vaucheri* Blackie. Fairly common in the *chênes verts* scrub in the Imouzzet area.

*Callophrys rubi* L. Large bright form still fresh round Ifran.

*Cigaritis zohra* Donz. Few seen in the Imouzzet area end of May.

*Heodes phlaeas* L. A few noted fresh near Ifran and Azrou.

*Lampides baeticus* L. One taken at Ifran on May 26th.

*Cupido lorquini* H.-S. Plentiful and still fresh in the Ifran region.

*Philotes bavius* Eversman Sporadic and fairly fresh near Ifran.

*Aricia cramera* Esch. Fairly common in the Ifran and Azrou regions.

*Cyaniris semiargus* Rott. Only two seen near Ifran.

*Polyommatus icarus* Rott. Fairly numerous, but not so common as the next species.

*Lysandra thersites* Chapman. Quite common in the Ifran area also at Azrou.

*Lysandra punctifera* Oberth. This splendid Blue was abundant among *Hippocrepis comosa* in the Ifran region.

*Pyrgus onopordi* Rambur Fairly common, but sporadic near Ifran and Azrou.

*Spialia ali* Oberth. Numerous near Ifran.

*Adopaea lineola* Ochs. Common in the Forêt de Jaba on June 1st.

Apart from a *Celerio livornica* Esp. taken at a window in the hotel at Azrou moths were mainly of the day-flying species. The most notable among these were *Hemaris tityus* L. and *Minucia lunaris* Schiff. both seen at Ifran where Burnets were just beginning to appear. The species noted there were the very small *Zygaena orana* Dup. and *Z. alluardi* Oberthür, while this species was also taken at Imouzzet. Two kinds of *Procris* (foresters) were very numerous in the long grass there. They seem referable to *P. cirtana* Luc. and *P. orana* Aust. The chief noctuids by day comprised *Heliothis dipsacea* L. in a large form *H. peltigera* Schiff. and *Acontia luctuosa* Schiff. I also had the good fortune to take a specimen of the small *Omia oberthüri* Allard considered a great prize among French collectors. The chief geometers were the very prevalent *Bichroma famula* Esp. and the Orange *Amygdalaptera testaria* Fab. *Scopula ornata* Scop. was fairly numerous and the tiny black and white Pyrale, *Titanio pollinalis* Schiff. Among grasses at Ifran were numerous companies of dark larvae resembling those of *Malacosoma castrensis* L.

Among other orders of insects seen were the striking green Ascalaphids, *Ascalaphus icterius* Chap. and the huge ground beetle *Meloë majalis* L.